

The Dying Navicular: When Chronic Midfoot Pain Reveals Mueller-Weiss Syndrome

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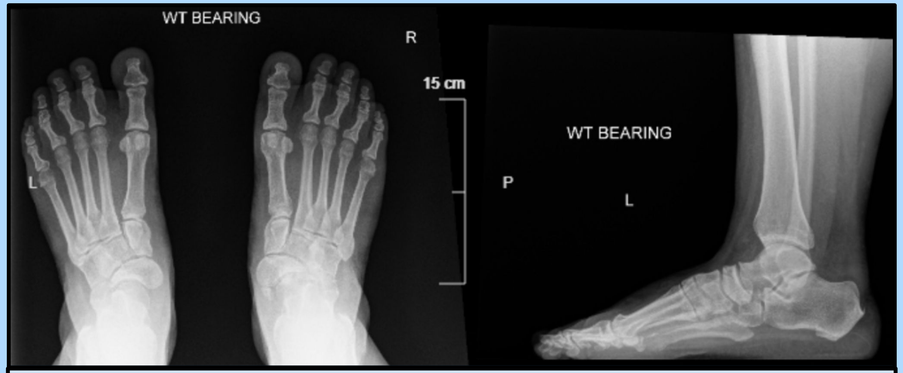
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Introduction

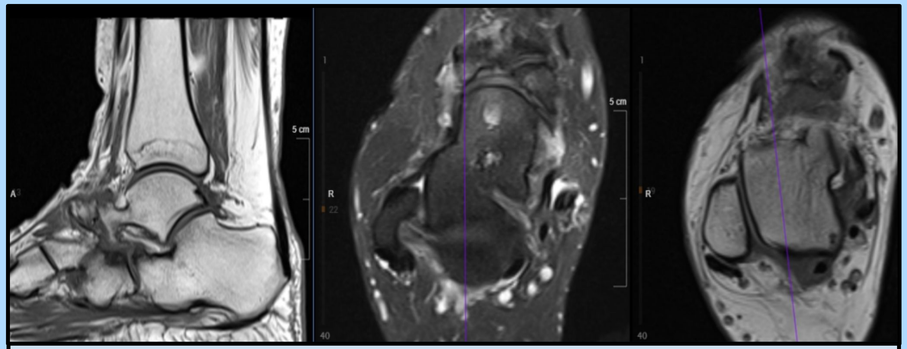
Müller-Weiss disease is a rare adult-onset spontaneous osteonecrosis of the navicular that often presents with chronic midfoot pain, progressive deformity, and collapse of the medial longitudinal arch. Delayed diagnosis is common because symptoms often mimic those of more prevalent causes of foot pain. Advanced disease often requires surgical intervention. This case highlights the perioperative management of a patient with Müller-Weiss disease undergoing talonavicular cuneiform arthrodesis and reviews the postoperative clinical course.

Initial Presentation & Workup

A 49-year-old woman with no PMH presented with approximately three years of progressive right ankle and midfoot pain exacerbated by ambulation and partially relieved by rest and immobilization. Conservative treatment including orthotics, topical diclofenac, over-the-counter analgesics, and physical therapy provided only limited symptomatic improvement. CT demonstrated lateral navicular collapse with fragmentation and subluxation consistent with osteonecrosis (Müller-Weiss disease), accompanied by talonavicular and naviculocuneiform arthrosis. Plain radiographs confirmed progressive navicular deformity and pes planus. The patient underwent right talonavicular cuneiform fusion with plate-and-screw fixation. Early postoperative evaluation demonstrated intact surgical hardware, satisfactory alignment, well-healed incisions, preserved distal neurovascular status, and no evidence of wound complications or infection. The patient remained compliant with non-weight-bearing restrictions and subsequently transitioned to protected weight bearing in a CAM boot. Pain progressively improved from 6/10 to 4–5/10 with acetaminophen as needed. Follow-up radiographs demonstrated maintained alignment and intact hardware, with no evidence of fixation failure. Outpatient physical therapy was initiated to restore gait mechanics and function, with gradual transition out of the CAM boot.



X-RAY IMPRESSION:
No acute fracture or dislocation. Osteophytosis at the talonavicular joint. Comma shaped appearance of the navicular may reflect prior osteonecrosis.Pes planus.



MRI IMPRESSION:
Evidence of Mueller Weiss syndrome with moderate talonavicular and mild naviculocuneiform arthrosis. Edema and cystic change along the medial margin of the cuboid, likely reactive.

Postoperative Course & Follow-Up

Following right talonavicular-cuneiform fusion on 4/13/26, serial radiographs demonstrated maintained alignment and intact hardware without fixation failure. The patient was successfully weaned from the CAM boot and progressed to ambulation with a cane. At follow-up, pain improved to 4–5/10 and was managed with acetaminophen as needed, without numbness or tingling. She continued PT twice weekly for ROM, strengthening, balance, posterior tibial tendon stability, and gait training. She tolerated therapy well, with modifications for intermittent increased pain, and continued a home exercise program with supportive footwear.

Discussion

Müller-Weiss disease remains an uncommon cause of chronic adult midfoot pain and should be considered when imaging demonstrates navicular collapse and fragmentation. Advanced disease frequently requires arthrodesis to restore alignment and relieve pain after failure of conservative therapy. This case illustrates successful early postoperative recovery following talonavicular cuneiform fusion. From an anesthetic perspective, these patients may benefit from multimodal analgesia and regional anesthesia techniques that facilitate postoperative rehabilitation while minimizing opioid exposure.

References

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